



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,558	04/02/2004	Horst Hoffmann	H 5341	3798
423	7590	05/09/2007		
HENKEL CORPORATION THE TRIAD, SUITE 200 2200 RENAISSANCE BLVD. GULPH MILLS, PA 19406			EXAMINER HAIDER, SAIRA BANO	
			ART UNIT 1711	PAPER NUMBER
			MAIL DATE 05/09/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/817,558	<b>Applicant(s)</b> HOFFMANN ET AL.	
	<b>Examiner</b> Saira Haider	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,6 and 20-22 is/are allowed.
- 6) ☒ Claim(s) 7-9 and 12-16 is/are rejected.
- 7) ☒ Claim(s) 10,11,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Examiner maintains the position set forth in the Office Action of 11/27/2006.

#### *Claim Rejections - 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 7 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. in view of Henkel.

4. From a Prior Office Action:

5. Schneider teaches multilayer thermoformable composite veneer films to be heated and applied to shaped wood parts, wood boards, plasterboard, metal, or metal sheets (abstract; col. 2 lines 31-46). Hot-melt polyurethane adhesives are used to apply the films to the substrates (col. 8 lines 12-22; examples). Several of the layers of the film may contain poly(meth)acrylate materials (col. 4 lines 24-41; col. 5 lines 14-28; col. 5 lines 42-65), demonstrating the application of an acrylate-containing film to a substrate via polyurethane hot-melt adhesive. The exterior layer is pre-treated by corona treatment to aid the adhesion of the bonding layer (col. 7 lines 45-50). However, the reference does not disclose the applicant's specific adhesive composition. Hence attention is directed towards the Henkel reference.

6. Henkel discloses moisture-curable hot melt polyurethane adhesives comprising reaction products of polyisocyanates and hydroxyl-containing low molecular weight polymers derived from ethylenically unsaturated monomers (abstract). Prepolymers are made by reacting the polyisocyanate with polyether polyols, polyester polyols, and/or aromatic polyols (p. 10 lines 5-7). Mixtures of crystalline and amorphous polyesters are used (p. 11 lines 27-29). Specifically, Henkel discloses that mixture of 2 to 3 polyether polyols differing in their average molecular weight may be used,

Art Unit: 1711

preferred polyether polyols are diols, wherein the average molecular weight (number average molecular weight) of the polyether polyols is in the range from 200 to 10,000 and preferably in the range of 400 to 6,000. Henkel provides guidance on the desired average molecular weight of the polyether polyol diols, specifically; Henkel guides one towards the lower end of the average molecular weight range. Hence, Henkel would envisage employment of the polyether polyol diols as claimed. Tackifying resins are used, including those containing active hydrogen groups (p. 10 lines 8-25; p. 14 lines 25-27; p. 15 lines 30-31). Henkel teaches moisture-cured hot melt polyurethane adhesives having improved heat resistance, moisture resistance, and solvent resistance when applied to wood substrates (p. 18 lines 3-12).

7. Additionally, It is the examiner's position that the number average molecular weights are result effective variables because changing them will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. In view of this, it would have been obvious to one of ordinary skill in the art to utilize two diols having molecular weights including those within the scope of the present claims so as to produce desired end results.

9. In view of the foregoing, it would have been prima facie obvious to use the hot-melt adhesives of Henkel's invention as the bonding layer in Schneider's articles to provide improved heat resistance, moisture resistance, and solvent resistance.

10. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fields et al. in view of Henkel.

Art Unit: 1711

11. From a Prior Office Action:

12. Fields discloses flexible, weatherable decorative sheet materials comprising color coats, clear coats, adhesives, and a thermoformable backing (figures 4-5). Both pigmented and colorless paint films are formed from alloys containing methacrylate polymers (col. 6 line 26-col. 7 line 15; example). Adhesives used to attach the paint films to a thermoformable backing include urethane adhesives (col. 7 lines 46-51), and thermoformable backings include ABS, PVC, and polypropylene (col. 8 lines 25-34). However, the reference does not disclose the applicant's specific adhesive composition. Hence, attention is directed towards the Henkel reference.

13. Henkel discloses moisture-curable hot melt polyurethane adhesives comprising reaction products of polyisocyanates and hydroxyl-containing low molecular weight polymers derived from ethylenically unsaturated monomers (abstract). Prepolymers are made by reacting the polyisocyanate with polyether polyols, polyester polyols, and/or aromatic polyols (p. 10 lines 5-7). Mixtures of crystalline and amorphous polyesters are used (p. 11 lines 27-29). Specifically, Henkel discloses that mixture of 2 to 3 polyether polyols differing in their average molecular weight may be used, preferred polyether polyols are diols, wherein the average molecular weight (number average molecular weight) of the polyether polyols is in the range from 200 to 10,000 and preferably in the range of 400 to 6,000. Henkel provides guidance on the desired average molecular weight of the polyether polyol diols, specifically; Henkel guides one towards the lower end of the average molecular weight range. Hence, Henkel would envisage employment of the polyether polyol diols as claimed. Tackifying resins are used, including those containing active hydrogen groups (p. 10 lines 8-25; p. 14 lines 25-27; p. 15 lines 30-31). Henkel teaches moisture-cured hot melt polyurethane adhesives having improved heat resistance, moisture resistance, and solvent resistance when applied to thermoplastic substrates (p. 18 lines 3-12; p. 23 lines 5-15).

Art Unit: 1711

14. Additionally, It is the examiner's position that the number average molecular weights are result effective variables because changing them will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

15. In view of this, it would have been obvious to one of ordinary skill in the art to utilize two diols having molecular weights including those within the scope of the present claims so as to produce desired end results.

16. Thus, it would have been prima facie obvious to use the hot-melt adhesives of Henkel's invention as the bonding layer in Schneider's articles to provide improved heat resistance, moisture resistance, and solvent resistance.

17. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. in view of Henkel as applied to claims 7 and 12-15 above, and further in view of Kokrhanek.

18. From a Prior Office Action:

**19.** Schneider and Henkel apply as above, teaching the application of synthetic veneers to wood parts but failing to teach a pretreatment step for the wood before the veneers are applied. Kokrhanek teaches that primer layers are used on the wood layers to promote adhesion of the bonding layer (col. 7 lines 6-21). It is the examiner's position that it would have been prima facie obvious to use primer layers in the inventions of Schneider and Henkel to promote the adhesion of the bonding layers.

***Declaration under 37 CFR §1.132***

20. The Declaration under 37 CFR 1.132 February 6, 2007 is insufficient to overcome the rejection of the claims as set forth in the above because: the objective evidence of nonobviousness is not commensurate in scope with the claims which the evidence is offered to support. In other words, the showing of unexpected results fails to prove that the results occur over the entire claimed range. MPEP § 716.02(d).

21. In reference to the requirement regarding comparison to the closest prior art (i.e. comparison to an embodiment expressly disclosed in the prior art), applicants have met this burden by providing a comparative example wherein the second polyether polyol has an average molecular weight of 1,000 (example 5).

22. However, as noted above, and as noted in the previous office actions, applicants have not met the burden of establishing criticality/unexpected results of the claimed range. Applicants providing an example wherein the second polyether polyol has an average molecular weight of 400 is considered deficient to establish unexpected results of the entire claimed range of not greater than 800. Applicant has established that the properties of a composition prepared by reacting a second polyether polyol of molecular weight 400 (examples 2 and 3) are unexpected to that to a composition prepared by reacting a second polyether polyol of molecular weight 1,000 (example 5). In view of the unexpected results, one of ordinary skill would not expect that the unobvious properties obtained at 400 would also be obtained at 800 (a difference of 400), rather one would expect the properties at 800 to be substantially similar to that at 1000 (a difference of 200). Thus the declaration has been held insufficient to rebut the above rejections.

***Response to Arguments***

23. Applicant has essentially argued that the Henkel reference fails to recognize the criticality of utilizing at least two diols having the claimed molecular weights, and the reference fails to motivate one to operate within the claimed ranges. In response, it is not necessary that the prior art recognize the criticality of the claimed range, rather the disclosure and guidance of the prior art is sufficient for one of ordinary skill in the art to operate within the claimed ranges.

***Conclusion***

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Haider whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 9am-5pm.



Art Unit: 1711

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saira Haider  
Examiner  
Art Unit 1711



**James J. Seidleck**  
**Supervisory Patent Examiner**  
**Technology Center 1700**